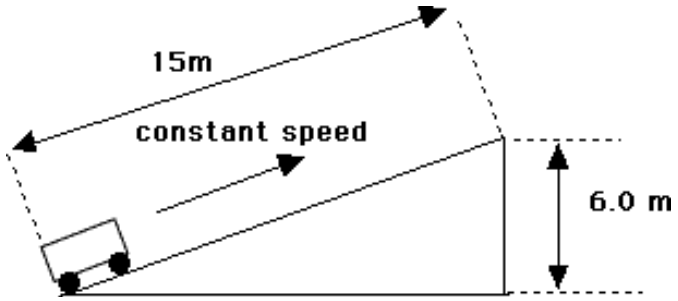
Example #7: For the diagram below, if the cart goes from the bottom to the top in 16 seconds, how much power was developed?



mass 40 kg no friction

→ work is only done against gravity, so

$$P = \frac{W}{t} = \frac{\Delta E_p}{t} = \frac{mg\Delta h}{t}$$

$$= \frac{40(9.8)(6.0)}{16}$$

$$\boxed{P = 1.5 \times 10^2 \text{ W}}$$